

## Notes on the Coleophoridae

By J. NEWTON \*

Kloet and Hincks (1972) list no fewer than 102 British species in this group, a formidable number for an amateur to tackle, although a less daunting task since the discovery of genitalia determination. So many species look alike in the imago stage that collectors, before this discovery, must have had many problems of identification, and many errors must have been made and recorded. It is almost impossible to identify with certainty many species which have just been netted in the field, often in worn condition. We know now that to achieve success we must collect larval cases rather than moths, and breed. The foodplant upon which the cases are found, the angle of posture which the case makes with the leaf or stem, and the structure and shape of the case itself all help to track down the species. Then, having bred your moths, and if there is still uncertainty about the species, it is essential to examine the genitalia. Unfortunately there is often no other alternative. Although time consuming, I found it not so difficult as I once thought, but the sparsity of reliable references published in English, is frustrating. Here then are some of my findings during the past three years.

*Metriotes lutarea* Haw. (*modestella* Dup.). — A species which is apparently not so common now as in former years, and until 1978, not recorded for Gloucestershire since 1914. The foodplant is still unknown, I found several specimens on flowers of *Stellaria holostea* near Coleford, Forest-of-Dean, on 22nd May 1978.

*Coleophora caespitiella* Zell. (*agrammella* Wood). — In September 1977 I collected in the Forest-of-Dean, a bag of seed-heads of *Juncus* spp. which had many coleophorid cases on them. My plan was to sort out the species when moths emerged in 1978 by genitalia examination. This I did and found most to be *C. alticolella* Zell., and also several *C. glaucicolella* Wood. However, among these were two appreciably smaller and paler moths (7-8 mm.), a male and female. The genitalia of these showed them to be *C. caespitiella* Zell.

*C. sylvaticella* Wood. — Mr. L. Price and I found moths numerous on *Luzula sylvatica* in June 1978 near Coleford. Cases were collected later in August. These were placed on potted plants of *L. sylvatica* for the winter, and I was interested to note that besides several full-sized cases there were several much smaller cases. This species has been known in Monmouthshire for several years, but at Coleford constitutes a new record for Gloucestershire.

*C. flavipennella* Dup. — Cases common on oak near Tetbury, Glos., on June 26th 1978. Several moths emerged in July. As this species has been confused with *C. lutipennella* Zell., and I have specimens of the latter bred from oak in Hertfordshire in 1977, I examined both. This revealed the Tetbury specimens to be *flavipennella*. I also examined two

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specimens, collected some years ago in the Forest-of-Dean, by Mr. Price, and found these to be *flavipennella*. Fletcher and Clutterbuck (1938-45) record *lutipennella* from Durdham Down; Gloucester City; and Longhope; the most recent recent being in 1921, but *flavipennella* is not mentioned. It may be that these old records should really be for *flavipennella*, but in the absence of the actual specimens this cannot now be proved. The two species are similar both as moths and cases. My specimens of *lutipennella* are more ochreous than *flavipennella*.

*C. atriplicis* Meyr. — In September 1977, Mr. Price and I collected many cases from *Atriplex patula* on the tidal shores of the R. Severn, most of which produced moths in July 1978. At first we believed them to be cases of *C. annulatella* Tengst., but, having three specimens of the latter from Tetbury, one of which was determined by Dr. J. Bradley, I prepared a few slides of the genitalia. A difference, particularly in the male, was strikingly apparent. Thanks to the figures in Patzak (1974), I was able to determine the species as *atriplicis*, thus giving Gloucestershire another new record.

One group I have found difficult is the troublesome trio *limosipennella*, *alnifoliae* and *milvipennis*.

*C. alnifoliae* Barasch. — Ellerton (1970) has: "there appears to be doubt as to whether this is distinct from *C. milvipennis* Zell. The larvae of *alnifoliae* begin feeding on birch and alder in autumn, and feed up in the spring, producing moths in July-August, or over-wintering again". Chalmers-Hunt (1975): "cases on alder and birch, Sussex in June 1971. One of these on birch producing a female in July 1971". Also, "three cases on birch, June 1972, and a male bred from these in May 1973". Mr. S. E. Whitebread informs me that normally *alnifoliae* has a one-year cycle in Switzerland, but a few individuals carry over to the following year. He has never found cases on birch, always alder, and this has also been my experience. So far as I know there has not yet been published in English a description of the imago of either *milvipennis* or *alnifoliae*, and I am grateful to Mr. Whitebread for supplying me with a translation for both from Toll (1962). In 1977 I found two cases on alder at Tetbury in July and a third in the Forest-of-Dean in September. I bred only one moth from these on June 6th 1978 from a Tetbury case.

In 1978, Mr. Price and I collected several cases in the Forest-of-Dean on *Alnus glutinosa* and *A. incana*. Nearly all were full-sized cases, but two were quite small and untidily constructed. At first from the appearance of the one moth bred, I believed these to be *limosipennella*, but Mr. Whitebread assures me that this species is confined to elm, and this is supported by Mr. Chalmers-Hunt's findings in Kent in 1971-72. This being so then my specimens on alder must either be *milvipennis* or *alnifoliae*. One factor which tends to make me settle for mine being *alnifoliae* is that in June

1978 I collected a number of cases on birch in Surrey and bred two moths from these in July. Some of the remaining cases still contained live larvae on September 19th and were sleeved out on birch, hopefully to produce moths in 1979. Comparing my two Surrey bred moths from birch with the Gloucestershire moth bred from alder, the birch specimens are light brown in colour, whereas the alder specimen is ferruginous brown. Also, the birch cases average 2 mm. shorter than the alder cases, and are inclined at a steeper angle to the leaf. I have examined the genitalia of the birch specimens, both females, and they compare favourably with Patzak's figure for *milvipennis*. I have several cases on alder sleeved out for the winter and look forward to the possibility of being able to examine the genitalia of moths in 1979. According to Patzak's figures the two species can be distinguished by the genitalia, but so far as identification in the field is concerned it would appear that the key lies in their to hear from anyone who has bred a specimen of *alnifoliae* cases have been found on birch and alder. I would be pleased to hear from anyone who has bred a specimen of *alnifolia* from birch and had it confirmed by genitalia examination.

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I am indebted to Dr. J. D. Bradley for confirming my slides of the genitalia of *C. caespitiitella*, *C. flavipennella*, *C. lutipennella* and *C. atriplicis*; and to Mr. S. E. Whitebread for his help.

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